

REMARKS

Favorable reconsideration of the application is respectfully requested in light of the amendments and remarks herein.

Upon entry of this amendment, claims 1-14 will be pending. By this amendment, claims 2-3 have been canceled; claim 1 has been amended; and claims 7-14 have been added. No new matter has been added.

Objections to the Drawings

In Section 2 of the Office Action, the Examiner has objected to Figures 1, 2A-2F and 3A-3F for failing to include a legend such as "Prior Art". Figures 1, 2A-2F and 3A-3F have been amended, obviating the objection. Accordingly, it is respectfully requested that this objection be withdrawn.

§102 Rejection of Claims 1-6

In Section 4 of the Office Action, the Examiner has rejected claims 1-6 under 35 U.S.C. §102(b) as being anticipated by Applicant's admitted Prior Art. Claim 1 has been amended to address the rejection.

In the Background section of the Specification, it was disclosed that "[i]n general, as the High-level period of the defect signal becomes longer, the control error tends to be increased. Hence, in case where the control error is large if not departing from a normal servo control range when the level of the defect signal returns to Low, for example, as shown in Figs. 3A, 3B, 3C, 3D, and 3E, the servo continues to be unstable and requires considerable time before the servo returns to a normal control state." *Background of the Specification, page 7, lines 15-22.*

"In order to return the servo quickly to the normal control state, there is known a method which maintains a servo loop gain at a higher-than-normal level immediately after a track jump or the like. However, when the servo loop gain is high, the servo is generally too sensitive to a defect such as a flaw on the optical disk. Therefore, the method of increasing the servo loop gain cannot be used to improve defect passage characteristics." *Background of the Specification, page 7, line 23 to page 8, line 6.*

To address the above-described difficulties, embodiments of the present invention provide apparatus, method, and program for reproducing data recorded on a disk medium by using an optical pickup. For example, the structure of apparatus claim 1, as presented herein, includes:

"RF signal generating means for generating an RF signal on the basis of an analog signal outputted by said optical pickup;

data signal generating means for generating a data signal by binarizing said RF signal;

defect signal generating means for generating a defect signal for indicating a defect on said disk medium on the basis of said RF signal;

focus error signal generating means for generating a focus error signal on the basis of said analog signal outputted by said optical pickup;

focus servo control means for controlling a focus servo of said optical pickup in response to said focus error signal;

tracking error signal generating means for generating a tracking error signal on the basis of said analog signal outputted by said optical pickup;

tracking servo control means for controlling a tracking servo of said optical pickup in response to said tracking error signal;

monitoring means for monitoring said defect signal and thereby detecting a start and an end of a defect period;

defect period processing control means for controlling said focus servo control means and said tracking servo control means so that said focus servo control

means and said tracking servo control means perform defect period processing when a result of the monitoring by said monitoring means indicates said defect period,

wherein the defect period processing includes controlling said focus servo control means and said tracking servo control means so that one of said focus error signal and said tracking error signal of said optical pickup is held at a previous value; and

post-defect period processing control means for controlling said focus servo control means and said tracking servo control means so that said focus servo control means and said tracking servo control means perform post-defect period processing when a result of the monitoring by said monitoring means indicates the end of said defect period,

wherein the post-defect period processing includes controlling said focus servo control means and said tracking servo control means so that one of said focus servo and said tracking servo of said optical pickup is driven with an increased servo gain." (emphasis added)

Claim 1, as presented herein, clearly indicates the defect period processing of holding the previous value and the post-defect period processing of driving the focus servo and the tracking servo of the optical pickup with increased servo gain.

Since the defect period processing and the post-defect period processing described in claim 1 are not taught in the Background section of the Specification, claim 1 should be allowable over Applicant's admitted Prior Art. Furthermore, since independent claims 5 and 6 closely parallel, and include substantially similar limitations as, independent claim 1, claims 5 and 6 should also be allowable over Applicant's admitted Prior Art. Since claim 4 depends from claim 1, claim 4 should also be allowable over Applicant's admitted Prior Art. Claims 2-3 have been canceled.

Accordingly, it is submitted that the Examiner's rejection of claims 1-6 based upon 35 U.S.C. §102(b) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

Newly-added Claims 7-14

Based on the foregoing discussion regarding claim 1, and since claims 7-10 depend from claim 1, claims 7-10 should also be allowable over Applicant's admitted Prior Art.

Each of independent claims 11 and 13 includes an added limitation that "the defect period processing includes controlling said focus servo control means and said tracking servo control means so that at least one of said focus servo and said tracking servo is not energized". This limitation is disclosed on page 30, lines 20-24 of the Specification.

Therefore, claims 11 and 13 should be allowable over Applicant's admitted Prior Art. Furthermore, since claims 12 and 14 depend from claim 11 and 13, respectively, claims 12 and 14 should also be allowable over Applicant's admitted Prior Art.

Conclusion

In view of the foregoing, entry of this amendment, and the allowance of this application with claims 1-14 are respectfully solicited.

In regard to the claims amended herein and throughout the prosecution of this application, it is submitted that these claims, as originally presented, are patentably distinct over the prior art of record, and that these claims were in full compliance with the requirements of 35 U.S.C. §112. Changes that have been made to these claims were not made for the purpose of patentability within the meaning of 35 U.S.C. §§101, 102, 103 or 112. Rather, these changes were made simply for clarification and to round out the scope of protection to which Applicant is entitled.

In the event that additional cooperation in this case may be helpful to complete its prosecution, the Examiner is cordially invited to contact Applicant's representative at the telephone number written below.

The Commissioner is hereby authorized to charge any insufficient fees or credit any overpayment associated with the above-identified application to Deposit Account 50-0320.

Respectfully submitted,

FROMMER LAWRENCE & HAUG LLP

By: Samuel S. Lee, Reg. No. 42,791 for
William S. Frommer
Reg. No. 25,506
(212) 588-0800

Attachments